

**AMENDMENT AND PRESENTATION OF CLAIMS**

Please replace all prior claims in the present application with the following claims.

1. (Currently Amended) ~~A network system, comprising:~~ An apparatus comprising:  
at least one processor; and  
at least one memory including computer program code,  
the at least one memory and the computer program code configured to, with the at least one  
processor, cause the apparatus to perform at least the following:  
determine to communicate with one or more terminals operable in a first type of network  
system;  
~~a network infrastructure comprising a plurality of network systems;~~  
determine to expose a loosely-coupled interface to a service provision infrastructure for  
brokering added-value network services from one or more of the terminals and network  
systems to the service provision infrastructure, wherein the service provision  
infrastructure is for use by one or more of the terminals that hosts network-enabled  
applications and that is configured to interface with a second type of network system.  
system; and  
~~at least one network service broker comprising at least one terminal coupled broker to~~  
~~communicate directly with one or more terminals and a loosely-coupled interface exposed~~  
~~to the service provision infrastructure for brokering added-value network services from~~  
~~one or more of the terminals and network systems to the service provision infrastructure.~~
2. (Currently Amended) The ~~network system~~ apparatus as in Claim 1, wherein the  
loosely-coupled interface is a loosely-coupled standardized interface.

3. (Currently Amended) The ~~network-system~~ apparatus as in Claim 2, wherein the loosely-coupled standardized interface is defined in Extensible Markup Language (XML).

4. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the loosely-coupled interface comprises a web services interface.

5. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the loosely-coupled interface comprises a single loosely-coupled web service interface exposed to the service provision infrastructure.

6. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network-service broker comprises at least one network-coupled broker~~ apparatus is further caused to determine to communicate with one or more network elements in the network infrastructure.

7. (Canceled)

8. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network-service broker comprises at least one hybrid network-service broker~~ apparatus is further caused to determine to communicate with one or more network elements in the network infrastructure and with one or more terminals.

9. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network-service broker is an authentication broker~~ apparatus is further caused to determine to access authentication services for use by the network-enabled application.

10. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a charging broker~~ apparatus is further caused to determine to access a charging/billing service in connection with use of the network-enabled application.

11. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a location broker~~ apparatus is further caused to determine to access a terminal location service to allow a location of the terminal to be provided to the network-enabled application.

12. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a content ordering broker~~ apparatus is further caused to determine to store subscription information to a profile register and to verify subscription intentions of an end-user of the terminal.

13. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a presence broker~~ apparatus is further caused to determine to access a presence service to allow user presence information to be provided to the network-enabled application.

14. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a client provisioning broker~~ apparatus is further caused to determine to broker provisioning of mobile terminals.

15. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a notification broker~~ apparatus is further caused to determine to facilitate pushing content to the terminals.

16. (Currently Amended) The ~~network-system~~ apparatus as in Claim 1, wherein the ~~network service broker is a privacy broker~~ apparatus is further caused to determine to access end-user privacy information and determine to control which information other brokers will provide to the service provision infrastructure.

17. (Currently Amended) The ~~network-system~~ apparatus as in Claim 16, wherein the ~~privacy broker controls~~ determination to control which information other brokers will provide to the service provision infrastructure is based on parameters defined by an end-user of the terminal, wherein the parameters may be provided by the end-user manually at a time in which the end-user privacy information is required, or automatically where the parameters were defined by the end-user in advance.

18. (Currently Amended) A method, comprising:

determining to provide ~~providing~~ at least one network service broker logically between one or more network infrastructures, wherein at least one of the network infrastructures is of a first type of network system, and a service provision infrastructure operating on top of the network infrastructures and configured to interface with a second type of network system wherein the network service broker comprises at least one terminal-coupled broker to communicate directly with one or more terminals;

~~determining to expose~~ ~~exposing~~ a loosely-coupled interface of the network service broker to the service provision infrastructure; and

~~determining to facilitate~~ ~~facilitating~~ access by network applications of the second type of network system to value-added services within the at least one network infrastructure of the first type of network system via the loosely-coupled network service broker interface.

19. (Currently Amended) The method of Claim 18, wherein the determination to facilitate ~~facilitating~~ access via the loosely-coupled network service broker interface comprises making the service available to the applications via the loosely-coupled network service broker interface using any of a plurality of service provision infrastructure technologies.

20. (Currently Amended) The method of Claim 18, further comprising determining to communicate ~~communicating~~ between the network service broker and the network infrastructure regardless of technological differences in one or more different network elements operating within the network infrastructure.

21. (Currently Amended) The method of Claim 18, further comprising determining to communicate ~~communicating~~ between the network service broker and the network infrastructure regardless of technological differences in one or more network infrastructure network systems having different access methods.

22. (Original) The method of Claim 18, wherein the one or more network infrastructures collectively implement a plurality of different network technologies, and wherein the network

service broker accommodates technological variations between the network technologies and service provision infrastructure technologies.

23. (Currently Amended) The method of Claim 18, wherein the determination to expose ~~exposing~~ a loosely-coupled interface of the network service broker to the service provision infrastructure comprises exposing a loosely-coupled web services interface to the service provision infrastructure.

24. (Currently Amended) The method of Claim 18, further comprising determining to define ~~defining~~ the loosely-coupled interface in Extensible Markup Language (XML).

25. (Currently Amended) The method of Claim 18, wherein the determination to provide ~~providing~~ at least one network service broker comprises providing a plurality of network service brokers, and wherein each of the plurality of network service brokers comprises a loosely-coupled interface exposed to the service provision infrastructure for communication therebetween.

26. (Original) The method of Claim 25, wherein at least some of the plurality of network service brokers intercommunicate.

27. (Original) The method of Claim 18, wherein the network infrastructures comprise at least one fixed network.

28. (Original) The method of Claim 18, wherein the network infrastructures comprise at least one wireless network.

29. (Currently Amended) The method of Claim 18, further comprising determining to utilize ~~utilizing~~ the value-added service by the applications as arranged by the network service broker.

30. (Currently Amended) A method, comprising:

determining to provide ~~providing~~ at least one network service broker logically between one or more terminals operating in a first type of network system and a service provision infrastructure operating on top of a network infrastructure and configured to interface with a second type of network system;

determining to expose ~~exposing~~ a loosely-coupled interface of the network service broker to the service provision infrastructure; and

determining to facilitate ~~facilitating~~ access by the network applications directly to value-added services provided by the terminals via the loosely-coupled network service broker interface.

31. (Currently Amended) The method as in Claim 30, further comprising determining to communicate ~~communicating~~ a terminal type of one or more of the terminals to the network service broker, and determining to provide ~~providing~~ the terminal type to the service provision infrastructure via the loosely-coupled interface of the network service broker.

32. (Currently Amended) The method as in Claim 30, further comprising determining to configure ~~configuring~~ one or more user terminals via cooperative communication between the user terminals and the network service broker at the direction of the network application, wherein the configuration is accomplished regardless of the protocol utilized by the user terminals.

33. (Currently Amended) A method, comprising:

determining to provide ~~providing~~ at least one hybrid network service broker logically between one or more network infrastructures, wherein at least one of the network infrastructures is of a first type of network system, and a service provision infrastructure operating on top of the network infrastructures and configured to interface with a second type of network system, and between one or more terminals and the service provision infrastructure;

determining to expose ~~exposing~~ a loosely-coupled interface of the hybrid network service broker to the service provision infrastructure; and

determining to facilitate ~~facilitating~~ access by the network applications via the loosely-coupled hybrid network service broker interface directly to value-added services provided via one or both of the terminals and to value-added services provided by the network infrastructures.

34. (Currently Amended) A method, comprising:

determining to provide ~~providing~~ a use authorization voucher to a visited network service broker associated with a visited network;

receiving, at a service provision infrastructure, an address of the visited network service broker from a home network service broker associated with a home network of a terminal



that has roamed to the visited network, wherein the home network service broker exposes a loosely-coupled interface to the service provision infrastructure to facilitate communication therebetween;

determining to access ~~accessing~~ the visited network service broker by the service provision infrastructure using the address of the visited network service broker; and

determining to facilitate ~~facilitating~~ access by the service provision infrastructure to the web services available from the visited network via a loosely-coupled interface of the visited network service broker that is exposed to the service provision infrastructure.

35. (Currently Amended) The method as in Claim 34, wherein the determination to provide ~~providing~~ the use authorization voucher to the visited network service broker comprises providing the use authorization voucher to the service provision infrastructure via the loosely-coupled interface of the home network service broker, and in turn providing the use authorization voucher to the visited network service broker via the loosely-coupled interface of the visited network service broker.

36. (Currently Amended) The method as in Claim 34, wherein the determination to provide ~~providing~~ the use authorization voucher to the visited network service broker comprises directly providing the use authorization voucher from the home network service broker to the visited network service broker.

37. (Currently Amended) The method as in Claim 34, wherein the determination to provide the ~~providing a~~ use authorization voucher to the visited network service broker comprises providing the use authorization voucher to the visited network if a roaming agreement

between the home and visited networks authorizes providing the use authorization voucher to the visited network.

38. (Currently Amended) A method comprising: ~~of providing network applications that operate within a service provision infrastructure access to service functionality available via a visited network in which a user of a terminal has roamed, wherein a roaming agreement has been established between the visited network and a home network of the user of the terminal, the method comprising:~~

determining to communicate ~~communicating~~ between the a service provision infrastructure and a home network service broker associated with ~~the~~ a home network via a loosely-coupled interface of the home network service broker exposed to the service provision infrastructure; and

determining to communicate ~~communicating~~ between the home network service broker and a visited network service broker associated with ~~the~~ a visited network, wherein the home network service broker serves as a proxy in accessing ~~the~~ a service functionality available via the visited network.

39. (Currently Amended) A method comprising: ~~of providing network applications that operate within a service provision infrastructure access to service functionality available via a visited network in which a user of a terminal has roamed, wherein a roaming agreement has been established between the visited network and the service provision infrastructure, the method comprising:~~

~~determining to provide~~ providing a visited network service broker logically between ~~the a~~ visited network and ~~the a~~ service provision infrastructure operating on top of a network infrastructure;

~~determining to expose~~ exposing a loosely-coupled interface of the visited network service broker to the service provision infrastructure; and

~~determining to facilitate~~ facilitating access by the service provision infrastructure to ~~the a~~ service functionality available from the visited network via the loosely-coupled interface of the visited network service broker.

40. (Currently Amended) ~~A network service broker for facilitating access by a service provision infrastructure to service functionality available via one or more networks, the network service broker~~ An apparatus comprising:

at least one processor; and

at least one memory including computer program code,

the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following:

~~at least one terminal-coupled broker~~ determining to communicate directly with one or more terminals;

~~an interface~~ determining to access ~~the a~~ service functionality from a network infrastructure; and

~~a loosely-coupled interface exposed~~ determining to expose a loosely coupled interface to the a service provision infrastructure, wherein the loosely-coupled interface comprises a web services-based interface having Extensible Markup Language (XML) schemata built on

top of a web services platform to expose the service functionality available via ~~the~~ a network.

41. (Currently Amended) ~~A computer-readable storage medium having instructions stored thereon executable by a network service broker facilitating access to functionality to a network application, the network service broker performing steps comprising:~~ A non-transitory computer readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps:

receiving a request for value-added service information from a service provision infrastructure loosely coupled to the apparatus; ~~network service broker~~;

obtaining the value-added service information directly from a terminal coupled to the apparatus; ~~network service broker~~; and

determining to provide ~~providing~~ the obtained value-added service information to the service provision infrastructure.